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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,411	09/08/2003	Dieter Mauer	0275M-000768	9939
27572	7590	07/13/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			BRYANT, DAVID P	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,411

Applicant(s)

MAUER ET AL.

Examiner

David P. Bryant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-16,21-40 and 51-76 is/are pending in the application.
- 4a) Of the above claim(s) 1,7,13,16,27-40 and 51-76 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-26 is/are allowed.
- 6) ☒ Claim(s) 2-6,9-12,14,15 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 090803&122904.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species A, Figures 1-4, in the reply filed on April 25, 2005, is acknowledged. Since applicant failed to present any arguments in favor of the traversal, the requirement is still deemed proper and is therefore made FINAL.

It is noted that applicant contends that claims 1-6, 9-12, 14, 15, 21-24, 26, 51, 52, 54-57 and 67-75 are readable on the elected invention. However, this is not the case. Claim 1 is directed to a non-elected invention, i.e. a fastening element. Claims 51+ are not readable on the elected Species A, since they recite "a machine operable to rotate the mandrel in order to expand a portion of the shank" which is not a feature of the apparatus depicted in Figures 1-4. Also, this feature appears to be new matter, since none of the embodiments disclosed appears to include this feature. Claims 67+ are not readable on the elected Species A, since they recite "a machine operably advancing the shank and rotating the mandrel relative to the shank" which is not a feature of the apparatus depicted in Figures 1-4.

Thus, the claims readable on the elected Species A are 2-6, 9-12, 14, 15, 21-24, and 26. Claims 1, 7, 13, 16, 27-40, and 51-76 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Non-elected claim 25 has been rejoined with claims 22+, since independent generic claim 22 has been allowed, as set forth below.

Claim Objections

Claims 12 and 21 are objected to because of the following informalities:

Claim 12:

In line 2, “fastening element” should be changed to --fastener-- to maintain consistent claim terminology.

Claim 21:

In line 10, “workpiece-self piercing” should apparently be --workpiece self-piercing--.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6, 9-12, 14, 15, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21:

In lines 7-8, “a connecting segment configurable inside the shank” is indefinite, as it is unclear what meant by the terminology “configurable”. It is suggested that the term be deleted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6, 9-12, 14, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renner et al. (U.S. Patent No. 5,403,135) in view of Frauenheim (DE 37 44 450).

Claim 21: Renner et al. teach a fastener setting system, comprising:

a fastener 2 including:

(i) a non-frangible mandrel 9 having a foot 10; and

(ii) a hollow shank 4 including:

(a) a setting head 5 at a free end;

(b) a deformation segment 8 for forming a closure head;

(c) a connecting segment 7 inside the shank operably forming a fastenable connection with the mandrel foot; and

(d) a shank end 6 opposed to the setting head; and

a ram 14 detachably connectable to the mandrel and operably advancing the fastener toward a workpiece 1 (column 4, lines 62-67).

Although not explicitly disclosed, it is presumed that there is a die of some sort upon which workpiece 1 is positioned prior to riveting. However, Renner et al. is not relied upon to teach this feature. Further, Renner et al. fail to teach a workpiece self-piercing edge extending substantially along an outermost periphery of the shank at the shank end.

Frauenheim teaches a blind rivet fastener to be used in combination with a fastening system, the fastener comprising a mandrel 3 having a foot 4; and a hollow shank 1 including a

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setting head **2** at a free end and a shank end opposite the setting head having a workpiece self-piercing edge **6** extending substantially along an outermost periphery of the shank. As noted by Frauenheim in the Abstract, incorporating a punching edge on the shank end of the blind rivet fastener simplifies the setting of the fastener. To set the fastener in a workpiece **10**, the workpiece is supported on a base (i.e. a die), and a tool (i.e. a ram) applies pressure (denoted by the **F** arrows in Figure 1) on the setting head **2** of the fastener. Thereafter, the mandrel **3** is retracted to set the fastener in the workpiece **10**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a die in the fastening system of Renner et al., and a self-piercing edge on the shank end of the fastener of Renner et al., as taught by Frauenheim, to simplify the setting of the fastener.

Claims 2-6: As shown in Figures 1 and 2 of Renner et al., the shank and the mandrel are positively, geometrically, detachably connectable through corresponding threads **7** and **12**.

Claim 9: As clearly shown in Figures 1 and 2 of Renner et al., the setting head **5** has a diameter greater than each of the deformation segment **8**, the shank end **6**, and the mandrel foot **10**.

Claims 10 and 11: See column 4, lines 32-35 of Renner et al., where it is disclosed that the fastener may be aluminum.

Claim 12: The Figures of Renner et al., in combination with the disclosure that the fastener is a “tube” with a “diameter” suggests that the cross section of the fastener is circular.

Claim 14: As disclosed in column 4, lines 36-52, of Renner et al., the mandrel **9** comprises a conventional cap screw, which includes a fastener driving element (i.e. a slot) in its head **13**.

Claim 15: As shown in Figures 1 and 2 of Renner et al., the shank **2** is open at both ends.

Allowable Subject Matter

Claims 22-26 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to teach or fairly suggest the device as claimed, wherein the ram and holding tool are movable relative to the die independently of each other.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Bryant whose telephone number is (571) 272-4526. The examiner can normally be reached on Monday-Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David P. Bryant
Primary Examiner
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